

ABSTRACT

In the application of plasma spraying to a metal body, it is intended to attain reduction of spraying cost and improvement of working efficiency in roughening operation while maintaining anticorrosive effects. An adhesion strength of spray coating comparable to that obtained in the conventional combination of blast treatment and gas flame spraying can be realized even if roughening is conducted with the use of simple tools by performing in advance such a roughening treatment that the average roughness (Ra) of surface of thermal spray subject falls within the range of 2 to 10 μm with the use of a grinding tool and thereafter carrying out thermal spraying under such conditions that the average area of each of molten particles when molten particles of a thermal spray material have stuck to the surface of thermal spray subject falls within the range of 10000 to 100000 μm^2 . In the roughening by means of grinding tools, large-scale apparatus is not needed as different from the blast treatment, and portable small tools can be used in overhead location work at field repair. The scattering of powder resulting from grinding is slight so that the danger of environmental pollution is low.